

A G E N D A

SPECIAL MEETING, OCONEE COUNTY COUNCIL MEETING

TUESDAY, DECEMBER 12, 1995

3:00 PM

1. Call to Order
2. Invocation
3. Consideration of Engineering & Related Services To Close a Portion of Seneca Landfill - Mr. Jack Hirst, Solid Waste Director, Ms. Marianne Dillard, Purchasing Agent & Goldie & Associates
4. Old Business
5. New Business
6. Adjourn

12:00 pm Roads & Transportation Committee Meeting for the purpose of making a field trip to review several county roadways.

Consideration of Bids For Wheel Loader at the Rock Crusher has been postponed due to the three low bidders demonstrating their machines beginning Monday at 1:00 pm through Wednesday afternoon at the Rock Crusher. Council Members are invited to observe these demonstrations at their convenience.

MEMBERS, OCONEE COUNTY COUNCIL

Ms. M. Fran Burrell, District I Mr. Harrison E. Orr, District II
Mr. Harry Hamilton, District III Mr. Roy B. Strickland, District IV
Alton K. Williams, District V

MINUTES, SPECIAL MEETING OCONEE COUNTY COUNCIL MEETING

The Oconee County Council held a special meeting Tuesday, December 12, 1995 at 3:00 pm in Council Chambers with all Council Members except Ms. Burrell present. Mr. Cain, County Attorney, was also present. Mrs. Opal Green, Council Clerk was out due to illness and Ms. Brenda Smith was acting Clerk.

Members of the press notified (by mail):
Journal/Tribune, Keowee Courier, Westminster News, Anderson Independent, Greenville News, WGOG Radio, WBFM Radio, WCCP Radio, WYFF TV & WLOS TV.

Press

Members of the press present: Dick Mangrum - WGOG Radio, Jennifer Barnett - Anderson Independent, Ashton Hester - Keowee Courier.

Upon recommendation of Mr. Jack Hirst, Solid Waste Director & Ms. Marianne Dillard, Purchasing Agent, Mr. Strickland made a motion, seconded by Mr. Hamilton, approved 4 - 0 (Ms. Burrell absent) that the bid process be waived and the contract for engineering and related services be awarded to Goldie & Associates, Inc. at a cost not to exceed \$368,,281.75 which includes a fifteen (15%) contingency as per Section B, Subsection 2. "When it is to the advantage of Oconee County to acquire goods and/or services on the basis of previously awarded bids or contracts." of Ordinance 85-2, "Oconee County Manual of Centralized Purchasing", and further that the proposal of Goldie & Associates to Oconee County For Closure of the Seneca Landfill be made a part of the contract.

Solid Waste

See attached documents:

(1) Seneca Landfill Closure Engineering Design & Phase I Construction Services as presented to Council December 5, 1995

(2) Proposal to Oconee County For Closure of the Seneca Landfill

(3) Contract between Goldie & Associates, Inc. & Oconee County as approved by Mr. Cain, County Attorney.

Mr. Orr made a motion, seconded by Mr. Strickland, approved 4 - 0 (Ms. Burrell absent) that the verbiage as attached of Resolution 95-40 adopted by Council December 5, be adopted.

Res. 95-40

Minutes, Special Meeting, Oconee County Council
December 12, 1995
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Upon recommendation of the Roads & Transportation Committee, Council voted unanimously that a fifty (50) foot pipe and rip-rap be installed on Mud Creek Roadway (CE 27) at a cost of \$10,273.32 with funds coming from line item 10 022 00150 22881. (See December 5, 1995 for recommendation of Purchasing Agent and assignment of roadway problems to Roads & Transportation Committee)

Roads

Adjourn: 3:40 pm

Norman D. Crain
Norman D. Crain
Supervisor-Chairman
Oconee County Council

December 4, 1995

Mr. Norman Crain
Oconee County Supervisor
208 Booker Drive
Walhalla, SC 29691

GOLDIE
&
ASSOCIATES

*engineering, environmental
and laboratory services*

Re: Trees at Seneca Landfill
Project 22.13

Dear Mr. Crain:

As part of the Seneca Landfill closure, we have been assisting the County with evaluating whether trees planted several years ago can be left in place or should be removed to allow for construction of an impermeable cap. As we understand, the trees were planted on older filled portions of the landfill in the late 1970's.

The issue stems from the fact that the trees lead to greater infiltration of water through the soil and into the waste material, which can then pick up contaminants and leach into subsurface ground water.


Based on the fact that ground water has been impacted as documented through regular monitoring and hydropunch assessment; that DHEC has indicated they do not want the trees to remain at the site if it will cause a possible impact to the ground water; and that the source of the ground water impact is most likely derived from both wooded and non wooded areas, we recommend that the trees be removed and these areas be covered with the impermeable cap along with the rest of the landfill.

Since we feel the impact to ground water is derived from throughout the landfill, covering these wooded areas with the impermeable cap should contribute to reducing the impact to ground water. As we have discussed before, impact to ground water is a public health issue since some area residents use ground water as their drinking water supply.

If you have any further questions regarding this, please call.

Sincerely,

GOLDIE & ASSOCIATES


David R. Devoe, P.G.
Hydrogeologist

cc: Mr. Jack Hirst, Oconee County Solid Waste
Ms. Marianne Dillard, Oconee County Purchasing

Opal

This is last corrected
Copy 12-12-95
3:15 P.M.

BALLENGER, FEDDER, CAIN & NORTON, L.L.P.
ATTORNEYS AT LAW
339 ByPass 123, P.O. Box 698
Seneca, South Carolina 29679
(803) 882-6608
Facsimile (803) 882-7182

W.J. FEDDER (OF COUNSEL)
Timothy M. Cain, P.A.
Bradley A. Norton

WILLIAM H. BALLENGER (OF COUNSEL)
Karen F. Ballenger

FACSIMILE TRANSMISSION SHEET

DATE: 12-12-95 PAGES: 7
(including this page)

IN RE: Goldie contract

TO: Naman Cain

FIRM/COMPANY: _____

FAX NUMBER: _____

FROM: Tim Cain

FIRM/COMPANY: BALLENGER, FEDDER, CAIN, & NORTON, L.L.P.

FAX NUMBER: (803) 882-7182

SPECIAL INSTRUCTIONS TO RECEIVING OPERATOR: Attached are my
comments to Goldie contract. As we have previously discussed, I
am concerned about the lack of professional liability insurance
but understand that a determination has been made not to require it
IF THERE IS ANY PROBLEM IN RECEIVING THIS TRANSMITTAL, CALL 803-
882-6608.

WJ
(PERSON TRANSMITTING)

CONFIDENTIALITY: This Message is intended solely for the use of the addressee and may contain information that is privileged, confidential and exempt from disclosure under applicable law. If the reader of this message is not the intended recipient or the person responsible for delivery to the recipient, you are put on notice that any dissemination, distribution or copying of this communication is strictly prohibited. If you have received this communication in error, please notify us immediately by telephone, and return the original message to us at the above address via the U.S. Postal Service. Thank You.

Tim wants to read final copy
before NDC signs

STATE OF SOUTH CAROLINA

COUNTY OF OCONEE

This contract is entered into on this, the _____
Day of _____, 1995 by and between Oconee County,
hereinafter referred to as County, and Goldie & Associates, Inc.,
hereinafter referred to as Goldie.

WHEREAS, Oconee County must proceed to close its Seneca
Landfill in order to conform to governmental regulations and
requirements;

WHEREAS, Goldie & Associates, Inc. is an independent
consultant specializing in engineering, environmental, and
laboratory services with a staff of licensed professionals
capable of planning and supervising the landfill closure;

NOW THEREFORE, in consideration of the amounts paid to
Goldie, and the mutual promises set forth herein, the County does
hereby engage Goldie, and Goldie does agree to provide project
planning and management upon the following terms and conditions:

1. Goldie, as independent consultant, agrees to
provide the County with project planning, management, and
consulting services as set forth in its Job Number 22.15 dated
December 4, 1995, a copy of which is attached hereto and
incorporated herein.

2. The contract documents shall consist of this
Agreement, Job Number 22.15 as approved and all modifications
executed subsequent to this Agreement. All such documents are
considered to be as fully a part of this contract as if
enumerated herein.

3. The work to be performed hereunder shall commence
immediately upon the execution of this Agreement.

4. The County shall pay all invoices promptly upon
receipt and upon verification by the County that the services and
work shown upon the invoices have been completed.

5. Goldie shall maintain insurance coverage as follows
and provide proof of said coverage to the County:

- a. Worker's Compensation Insurance-statutory
- b. Employees Liability Insurance-\$1,000,000.00

Comprehensive

- c. Comprehension General Liability Insurance-
\$1,000,000.00/\$2,000,000.00
- d. Automobile Liability Insurance
\$1,000,000.00/\$2,000,000.00

6. In performing the services completed by the Agreement, Goldie acknowledges that it has no constructive use of County's site; and has no ongoing responsibility for construction site safety, (such being the responsibility of the general contractor). However, Goldie has a duty to preserve and protect public health, safety, and welfare. Further, Goldie has the duty to monitor construction activities in accordance with the terms of Job Number 22.15 and to determine if construction methods utilized by the contractor are satisfactory. Accordingly, it is Goldie's responsibility to take what it believes are prudent measures should they encounter situations that they believe create a danger to public health, safety, or welfare. If in the opinion of Goldie & Associates, the means and method of the construction are not in accordance with the terms of Job # 22.15, then Goldie & Associates shall have ability and authority to require immediate compliance or to dismiss the Contractor. ~~The County understands this situation and agrees to defend Goldie and hold it harmless from claims arising from its exercise of professional responsibility in this regard.~~

*Mr. Goldie
no problem*

7. The County will arrange for right-of-entry to properties for the purpose of performing studies, tests and evaluations pursuant to the agreed services. Goldie's field personnel are trained to initiate field testing, drilling and /or sampling within a reasonable distance of each designated location. Field personnel will avoid hazards or utilities, Goldie will give special instructions to its field personnel. Goldie is not responsible for any damage or losses due to undisclosed or unknown surface or subsurface conditions. ~~Except as a result of Goldie's negligence, the County agrees to indemnify Goldie from any such claims, suits or losses, including reasonable attorney's fees, resulting therefrom.~~

*Mr. Goldie
no problem
with change*

8. The presence of Goldie's personnel, either full-time or part-time, will be for the purpose of providing the services set forth in Job Number 22.15 to include construction observation and testing for specific aspects of the project as authorized by the County. Should a Contractor, not retained by Goldie be involved in the project, the County will advise the contractor, that Goldie's services are for observation only and that Goldie is acting solely as agent for the County in the supervision of the Contractor's performance. The County will also inform Contractor that the presence of Goldie's field representative will not relieve the Contractor of his

*Note: Goldie's insurance should cover this.
County's Carrier will not appear.*

responsibilities for performing the work in accordance with the County approved plans and specifications. Goldie will endeavor to insure that the Contractor proceeds with the work in a timely fashion and will advise the County if it appears that the Contractor is not performing the work in accordance with agreed upon time tables.

If a contractor (other than a subcontractor to Goldie) is involved in the project, the County agrees that, in accordance with generally accepted construction practices, the contractor will be responsible for working conditions on the jobsite, including safety of all persons and property during performance of the work. Goldie shall have no responsibility to see that the Contractor will comply with OSHA ~~or any other governmental regulations, and requirements.~~ It is agreed that Goldie will not be responsible for job or site safety on the project and that it does not have the duty or right to stop the work of the Contractor for safety related conditions, but Goldie shall promptly notify the Contractor and County if any condition which Goldie believes could affect the safety of the job site.

note: They are responsible for cleanup requirements.

9. It is possible that ^{unforeseeable} ~~unforeseen~~ conditions or occurrences may be encountered which could substantially alter the necessary services or the risks involved in completing the services. If this occurs, Goldie will promptly notify and consult with the County but will act based on its sole judgement where risk to its personnel is involved. Possible actions could include:

- a. Complete the original Scope of services in accordance with the procedures originally intended in its Proposal, if practicable.
- b. Agree with Client to modify the Scope of Services and the estimate of charges to include study of the unforeseen conditions or occurrences with such revision agreed to in writing.
- c. ~~Terminate the services with payment from the County for services performed to the date of termination.~~

Suggest we omit

Goldie acknowledges that the landfill site has been used as a landfill for in excess of thirty years, and was used as such for some time before the County began operating the landfill.

10. The County agrees to advise Goldie upon execution of this Agreement of any hazardous substances or any condition, known ~~of that should be known~~ by the County existing in, on, or near the site that presents potential danger to human health, the environment, or equipment. The County and Goldie agree to provide continuing information to each other as it becomes

available in the future. By virtue of entering into this Agreement or of providing services hereunder, Goldie does not assume control of or responsibility for the site or the person in charge of the site. Goldie will report to the County any conditions at the site that may present a potential danger to public health, safety or the environment. The County agrees to notify the appropriate federal, state or local agencies as required by law, or otherwise to disclose, in a timely manner, any information that may be necessary to prevent any danger to health, safety, or the environment.

11. Goldie will perform its services using that degree of care and skill ordinarily exercised under similar conditions by reputable members of its profession practicing in similar locality and in accordance with applicable law and regulations; however it is understood by the parties that Goldie cannot warrant DHEC approval or acceptance for additional requirements or changes in the law and regulations imposed by the County, DHEC, EPA, or any other governing agency instituted after the date of this contract. It is understood that Goldie will be responsible for keeping abreast of current legislative considerations and proposed changes being considered before the date of this contract.

12. It is acknowledged that time is ^{of the essence} ~~important~~ in the completion of the contract because of seasonal constraints. It is acknowledged by both parties that closure is a lengthy and meticulous process. It is also understood by both parties that if the closure deadline is not met, the result could cause an increase in work and materials required which would result in modifications to the original project and additional costs which could be substantial. It is understood that the County's contract between the County and the Contractor will include a requirement that the Contractor complete the project within a period specified by Goldie and that a penalty of at least \$1,000/day will be assessed to the contractor if ~~he~~ does not succeed in completing the project within the specified time period. Likewise, the Contractor will be awarded a bonus for early completion at a rate of \$1,000/day up to a maximum of \$30,000. Completion of the project will be defined as when both the County and Goldie & Associates accept the final punch list, with the exception of grassing which may not be apparent until a later time and would be handled as part of the Contractors warranty. Furthermore, Goldie will make a recommendation to the County regarding the selection of the Contractor and in doing so Goldie is not bound to ^{recommend} select the lowest bidder nor is the recommendation a warrant of the contractors work. It is expressly understood between the parties that Goldie accepts no responsibility for delays caused by the County, the weather, the

and
closure
deadlines

contractor

Goldie
list
to tape

at #
380

contractor, or any unforeseen conditions which may be present on site. Unless caused by Goldie's negligence, Goldie accepts no responsibility for, and the County agrees to hold Goldie harmless from any fines or violations, which may be assessed to the County by any governmental agency or commission and from any increased costs or expenses necessitated by modification of the closure plan in order to meet additional governmental requirements and regulations instituted after the date of this contract. It is understood that Goldie will be responsible for keeping abreast of current legislative considerations and proposed changes being considered before the date of the contract.

OR failure to perform in accordance with the contract documents,

which were not known OR foreseeable by Goldie prior to the contract.

13. The parties agree to attempt to resolve any dispute without resort to litigation. However, should a claim be made that results in litigation, and should the claimant fail to prevail, then the claimant shall pay all costs incurred in defending the claim, including a reasonable attorney's fees.

14. This Agreement shall be governed in all respects by the laws of the State of South Carolina. If a Court of competent jurisdiction at any time holds that a portion of this Agreement is invalid, the remainder shall not be affected thereby and shall remain in full force and effect.

15. This Agreement, the attached documents, and any documents incorporated herein constitute the entire Agreement between the parties and can be changed only by a written instrument signed by both parties.

16. The undersigned expressly acknowledge that they are authorized on behalf of Oconee County and Goldie & Associates, Inc. to execute this Agreement and to bind the parties to the terms and conditions of this Agreement. Nevertheless, however, it is understood and agreed by the parties that any communication between the parties concerning the terms, conditions, questions, or authority to act shall be addressed (verbally or in writing) to:

dispute arise which results in litigation, the prevailing party shall be entitled to reimbursement of costs of litigation, to include a reasonable attorneys fee.

For the County:

Norman D. Crain, Supervisor/Chairman
208 Booker Drive
Walhalla, South Carolina 29691
803-882-4242

For Goldie & Associates, Inc.

Stephen R. Goldie
210-A W. North Second St.
Seneca, South Carolina 29678
803-882-8194

IN WITNESS WHEREOF the parties have hereunto set their
hands and seals this _____ day of _____, 1995.

WITNESSES:

Oconee County

By _____
its
Goldie & Associates, Inc.

By _____
its President

Contractor
Contractor

**PROPOSAL TO OCONEE COUNTY
FOR CLOSURE OF THE SENECA LANDFILL
PROJECT 22.15
REVISED DECEMBER 4, 1995**

I. BACKGROUND

As required by State and Federal regulations, the Seneca Landfill will have to be closed through construction of an impermeable cap. The purpose of this cap will be to shed water off of the landfill thereby minimizing water infiltration through the waste and into ground water.

Presently, there is no impermeable cap on the landfill. Without this cap, rain water is allowed to infiltrate through the waste of the landfill, picking up contaminants which migrate further into the aquifer below the landfill. This ground water impact is occurring at the landfill as documented through ongoing assessment work by Goldie & Associates.

Besides protecting ground water and public health, the potential exists for a commercial benefit from the closure. Methane gas could be captured and resold to nearby industries. Methane gas is a by-product of decomposition of wastes in landfills. Presently at the Seneca Landfill, methane is being vented to the atmosphere. With the construction of the cap, methane venting will be restricted due to the low permeability of the cap. However, due to the size of the landfill, provisions should be made to construct the cap to continue to allow venting. Additional provisions can be made to not only allow venting, but to also promote flow of methane to locations that can be later utilized for commercial uses.

The Seneca Landfill is presently not required to be closed until the Tri-County Regional Landfill is constructed. However, because most of the Seneca landfill is filled to capacity and inactive, and ground water impact has been well documented, early closure of these inactive areas would decrease the impact to ground water from the landfill without disrupting the present operations. As a result, the landfill can be closed in two phases. Phase I will consist of inactive areas and will be done in 1996. Phase II closure will consist of areas presently active and will commence once the Tri-County Regional Landfill becomes operational.

In order for Phase I closure to be conducted during 1996, the engineering work must begin in December 1995. This will allow for construction to begin in late spring and continue into late summer and fall. This period is the optimum construction period when weather conditions are most favorable for successful completion of the project. Delay of the project until the later months of 1996 will lead to less moisture control of the soil which is one of the most critical aspects of constructing the cap to meet DHEC requirements.

The proposed work detailed below would provide the County with the following:

1. Revised Closure Plan to DHEC as required under new regulations;
2. Phase I and II Closure Design Drawings and Specifications
3. Phase I Construction Services.

*Note: Phase II Construction Services and Bid Package Development are not included in this proposal.

Details on these services are provided below.

II. LANDFILL CLOSURE DESIGN SERVICES

The Design Services will provide:

1. Revised Closure Plan to DHEC as required under new regulations
2. Phase I and II Closure Design Drawings and Specifications

These services are outlined as follows:

A. PLANNING

To plan out preliminary design concept and design/construction schedule. Services will include:

- * Initial site evaluation
- * Design planning
- * Design scheduling
- * Review of schedule with Oconee County

COST FOR PLANNING SERVICES **\$3,400.00**

B. REGULATORY

To evaluate regulations to identify recent changes that could affect closure. Services will include:

- * Evaluation of Air Regulations regarding methane
- * Evaluation of Industrial Storm Water Regulations
- * Evaluation of Erosion Control Regulations
- * Evaluation of Solid Waste Regulations
- * Liaison with State and Federal Regulatory Officials

COST FOR REGULATORY SERVICES **\$2,300.00**

C. CONCEPT PRESENTATION TO DHEC

To present conceptual design plan to DHEC officials to work out overall closure details in relation to present and upcoming regulations. Services will include:

- * Pre-meeting liaison with DHEC officials
- * Meeting preparation
- * Travel to Columbia, South Carolina for a one (1) day meeting
- * Presentation of Design Concept to DHEC officials including:
 - * "tree issue"
 - * two phase approach
 - * drainage
 - * stormwater control
 - * cap design
 - * ground water impact
 - * methane gas venting
- * Follow-up letter to DHEC and Oconee County officials summarizing meeting and action to be taken in the design.

COST FOR CONCEPT PRESENTATION TO DHEC **\$2,700.00**

D. EVALUATE EXISTING CONDITIONS

An evaluation of the landfill will be conducted. Services will include:

- * Field Measurements/Survey of portions of the landfill and affected areas
- * Drafting to produce a drawing of existing conditions
- * Incorporate other Design Drawings (Vertical Expansion, C&D)

COST FOR EVALUATING EXISTING CONDITIONS **\$8,500.00**

E. GRADING AND EARTH WORK DESIGN

Details related to earth work design and specifications will be conducted. This design work includes the core design services related to the final cap system. Also included is consideration of cap foundation requirements as well as alternatives (bridge lifts) in the event that existing cap foundations are found during construction to be inferior. Services will include:

- * Soil Probing Investigation of landfill site to determine the volume of soil available at the site for grading (costs are assuming County will provide backhoe and operator at landfill site)
- * Site grading design to maintain slopes > 3% and < 3:1 as required by DHEC
- * Final Clay Cap Design
- * Bridge Lift Design

COST FOR GRADING AND EARTH WORK DESIGN **\$22,300.00**

F. DRAINAGE/EROSION CONTROL

Evaluate drainage runoff and develop erosion control systems to minimize erosional effects. Services will include:

- * Engineers postsurvey site evaluation
- * Consideration of drainage between Phase I and Phase II closure areas
- * Sediment Basin Evaluation and Design
- * Other Erosional Control Measures Evaluation
- * Ditch Design
- * Evaluation of Ditch Design for planned vertical expansion/C+D areas
- * Drainage/Erosion Control Specification Development

COST FOR DRAINAGE/EROSION CONTROL

\$22,400.00

G. METHANE GAS SYSTEM DESIGN

Due to the known presence of methane gas at the landfill, the Engineer recommends that a methane gas system be installed to, at a minimum, relieve pressure on the final cap. Relieving pressure will decrease the potential that the methane will migrate laterally offsite onto adjacent property. Two options are available at the Seneca Landfill regarding evaluation and design of methane gas systems. These are the passive and active systems. A passive system is designed with the intention of relieving pressure from the landfill cap and venting the methane to the atmosphere. The active system is typically designed such that a vacuum is placed on the landfill to prevent methane from migrating offsite. An active system can be utilized to recover methane for commercial use or to be burned in a flare. Current DHEC regulations allow passive venting of methane gas under the condition that the concentration of methane at the facility boundary or in any facility structure does not exceed twenty-five percent of the lower explosive limit of the gas. If the concentration of methane exceeds this limit, DHEC will require Oconee County to activate a remediation plan within sixty days. We propose designing a passive gas filter system that can be incorporated into an active gas filter system at a later time if needed or desired. This system will contain all necessary wells, piping, and filter material that will be necessary for an active system. The gas would be passively vented to the atmosphere. If it becomes necessary or desirable to place a vacuum on the landfill and switch to an active system, all the necessary underground appurtenances will be in place. For the system to become operational as an active system, it will be necessary to design and build all aboveground piping, pumps, and appurtenances. At additional costs, Goldie & Associates can provide design services for an active methane gas collection system if desired.

Design of only the subsurface system will include:

- * Evaluate current technologies regarding methane gas systems
- * Incorporate existing methane wells into proposed filter system
- * Preparation of specifications and detail drawings

COST OF METHANE GAS SYSTEM DESIGN **\$6,800.00**

H. OTHER DESIGN CONSIDERATIONS AND SPECIFICATION DEVELOPMENT

Design services will also include items in addition to those previously listed. This will include development of site specific drawings and specifications. This will include the following areas:

- * General Conditions
- * Gravel Roads
- * Fencing
- * Temporary Facilities
- * Grassing
- * Cast In Place Concrete
- * Signs

COST FOR OTHER DESIGN CONSIDERATIONS AND SPECIFICATION DEVELOPMENT **\$8,900.00**

I. SUBMIT REVISED CLOSURE PLAN

As required by DHEC, a revised closure plan must be submitted prior to beginning the closure construction activities. This task will consist of formatting the design material in a condensed format that will allow DHEC the opportunity to readily review the material.

COST TO SUBMIT REVISED CLOSURE PLAN **\$3,300.00**

J. VALUE ENGINEERING/PEER REVIEW

Following development of the design package, the Engineer, the Construction Management Specialist, a third party engineer, as well as Oconee County will review the design. The purpose of the review is to minimize the amount of change orders, cost overruns and delays during construction. Included in these costs are the review time, meeting time with County officials to present the design, and costs to revise the design following the review.

COST OF VALUE ENGINEERING **\$7,300.00**

K. DESIGN PHASE: PROJECT MANAGEMENT AND ADMINISTRATION

This will include engineering schedule tracking and liaison with Oconee County on the progress of the design.

COST OF PROJECT MANAGEMENT AND ADMINISTRATION **\$3,800.00**

III. BORROW SITE INVESTIGATIONS

The borrow site is the source area for the clay cap. Presently, preliminary investigations have been conducted on two sites to determine that some quantity of suitable clay exists at each site. If these sites are to be used for closure, further evaluation must be conducted to delineate the clay. However, preliminary cost estimates indicate that substantial costs will be involved in hauling soil from these sites due to the distance of both sites (5 miles and 13 miles) from the landfill. Thus, identification and testing of closer sites could lead to substantial reductions in construction costs. Below are details related to the costs of these further evaluations.

In the likely event that not all of the potential borrow sites are evaluated, the cost for the sites not evaluated will be deducted from the total price.

Borrow Site #1 - Further Evaluation of Richardson Farm:

- * Conduct excavation of 15 soil pits
- * Testing of soils
- * Topographic survey of site
- * Develop Storm Water/Erosion Control Plan
- * Submit Plan to DHEC

COST FOR BORROW SITE #1 EVALUATION **\$14,700.00**

Borrow Site #2 - Further Evaluation of Harris Farm:

- * Conduct excavation of 25 soil pits
- * Testing of soils
- * Topographic survey of site
- * Develop Storm Water/Erosion Control Plan
- * Submit Plan to DHEC

COST FOR BORROW SITE #2 EVALUATION **\$19,400.00**

Borrow Site #3 - Unknown Site - Assume 40 Acres:

- * Conduct excavation of 40 soil pits
- * Testing of soils
- * Topographic survey of site
- * Develop Storm Water/Erosion Control Plan
- * Submit Plan to DHEC

COST FOR BORROW SITE #3 EVALUATION **\$25,200.00**

Borrow Site #4 - Unknown Site - Assume 40 Acres:

- * Conduct excavation of 40 soil pits
- * Testing of soils
- * Topographic survey of site
- * Develop Storm Water/Erosion Control Plan
- * Submit Plan to DHEC

COST FOR BORROW SITE #4 EVALUATION **\$25,200.00**

TOTAL COST FOR BORROW SITE EVALUATIONS **\$84,500.00**

IV. PHASE I PRECONSTRUCTION BID PACKAGE DEVELOPMENT

A. BID PACKAGE DEVELOPMENT

Write and edit specification sections controlling how project will be bid and the relationship between the contractor and the County. Work includes writing the bid form and preparing the construction cost estimate.

COST FOR BID PACKAGE DEVELOPMENT **\$3,720.00**

B. BID ADMINISTRATION

Respond to questions from contractors and other concerned parties and issue addenda as required. Coordinate the advertisement for bids with the County. Coordinate and attend pre-bid and bid opening meetings with the County and the bidders. Coordinate the receipt of the bid bonds.

COST FOR BID ADMINISTRATION **\$2,720.00**

C. BID EVALUATION

Tabulate bids and discuss with the County. Evaluate bids and review contractor qualifications. Coordinate signing of the agreement between the Owner and the Contractor. Coordinate the receipt of the performance and payment bonds and Affidavits. Issue notice to proceed and notice of award. Attend a preconstruction meeting with the successful bidder and the owner.

COST FOR BID EVALUATION **\$3,400.00**

V. PHASE I CONSTRUCTION SERVICES

Costs for construction services will vary depending upon the size of the area to close during Phase I. Closure size will depend upon issues related to previously closed (wooded) areas which will need to be resolved early in the design phase of the project. Two areas are presently being considered for Phase I closure. These are a 23 and 40 acre area. The details of the design are presently not known, therefore only estimates for construction schedules are available at this time. Therefore we recommend a contingency be added to the costs listed below due to the uncertainty related to actual closure time.

For estimate purposes we assume a 90 work day construction period for the 23 acre site and a 150 work day construction period for the 40 acre site. Because the rate of construction is anticipated to be rapid, we have budgeted a full time engineer's field representative plus a second field representative working half time. The construction services will include the following:

- * Full-Time, On-Site Engineer's Representative for entire construction duration
- * Half-Time, 2nd On-Site Engineers Representative for entire construction duration
- * Project administration including pay request processing and change orders if required
- * Topographic survey for as-built drawing
- * Engineer's review

COST FOR PHASE I CONSTRUCTION SERVICES

<i>23 ACRE CLOSURE SITE</i>	<i>\$61,000.00</i>
<i>40 ACRE CLOSURE SITE</i>	<i>\$102,000.00</i>

VI. PHASE I SOIL TESTING

Soil testing is required by DHEC for closure acceptance. Testing services will include collection and testing using ASTM approved methods. The related costs are as follows:

<i>COST FOR SOIL TESTING OF 23 ACRE SITE</i>	<i>\$15,000.00</i>
<i>COST FOR SOIL TESTING OF 40 ACRE SITE</i>	<i>\$24,605.00</i>

VII. POST CONSTRUCTION

Following construction activities at the landfill, administrative and regulatory activities will need to be conducted to complete the project. This will include the Engineer's Final Certification,

Development of a Punch List, Site Tour with the County, and Site Tour with DHEC officials and other administrative activities.

COST FOR POST CONSTRUCTION ACTIVITIES

\$ 7,600.00

VIII. SUMMARY OF COSTS

DESIGN SERVICES	91,700.00
BORROW SITE INVESTIGATIONS	84,500.00
PRECONSTRUCTION	9,840.00
PHASE I CONSTRUCTION SERVICES (Assuming 40 Acre Site)	102,000.00
PHASE I SOIL TESTING (Assuming 40 Acre Site)	24,605.00
POST CONSTRUCTION	7,600.00

TOTAL PROJECT COSTS *\$ 320,245.00*

CONTINGENCY

Due to the unknown circumstances that could arise during the course of the services outlined above, we recommend that a 15% contingency be set aside. This will help assure that if unplanned circumstances arise during the course of the work, that work can proceed.

15% CONTINGENCY ON \$ 320,245.00 BUDGET *\$ 48,036.75*

SENECA LANDFILL CLOSURE
ENGINEERING DESIGN & PHASE I CONSTRUCTION SERVICES
OCONEE COUNTY COUNCIL MEETING DECEMBER 5, 1995
GOLDIE & ASSOCIATES

1. INTRODUCTION

- * Now on the verge of beginning closure of the Seneca landfill
- * Tonight present our proposal regarding how we plan to close the landfill.

2. LANDFILL CLOSURE

- * Recall that Closure is no longer a simple matter
- * Can't just cover up the last waste with dirt and lock gate with a sign that says "Landfill Closed"
- * Environmental Regulations have changed
- * Now Required to do extensive amounts of work to minimize the degree that the public health is affected
- * Now have to construct an Impermeable Cap that will intercept rainwater and divert it off the landfill
- * In addition, now have to consider additional items related to storm water drainage to protect cap and methane migration
- * The effect of these regulations was first realized by the County in 1992 when we prepared the Seneca and Five Forks Landfill Closure Plans
- * Since then we have assisted the County with closing of the Five Forks Landfill under these regulations

3. REGULATION CHANGE - DRIVING FORCE

- * Driving force behind the regulatory changes => GROUND WATER
- * EPA found that landfills contaminate ground water
- * 50% of U.S. uses Ground Water for drinking water source
- * Public Health Issue lead to regulation changes which have escalated Solid Waste Disposal costs dramatically in the past 5 years

4. PAYING FOR PAST PROBLEMS

- * Landfills now have tighter controls on what enters the facility
- * In addition, new landfills are now being constructed, at great expense, using systems that capture all the leachate prior to entering ground water
- * However past problems, particularly at older landfills like the Seneca Landfill still persist
- * At the Seneca landfill, as we have presented on earlier occasions, there is documented impact to the ground water from the landfill
- * As part of our continuing work with the County, we are presently further evaluating the effects of that impact on area residents who use ground water as a water source as well as conducting further assessment

5. TWO PHASE CLOSURE

- * The Seneca Landfill site is inactive except for the Vertical Expansion and C&D portions of the landfill
- * PHASE I: To close inactive areas in 1996
- * Purpose: To decrease future impact to ground water as soon as possible
- * PHASE II: Close the areas that are now operational upon opening of the new Tri County Regional Landfill
- * Closure of both phases could be done at the same time - However, delaying Phase I will lead to an increase in the amount of impact to ground water

6. PROPOSAL - Title Page = Proposal to Oconee County

- * For Engineering Services - does not include construction costs

* SECTION II: Engineering Design - pages 2 thru 6

- Preparation of Engineering Design Specifications and Drawings for General Contractor - both Phase I and II - entire site (appx 60 acres)
- Liaison with DHEC on behalf of the County regarding specific technical and regulatory closure issues
- Submission of Revised Closure Plan per new Regulations
- Duration 3 to 4 months - Design Cost = \$ 91,700

* SECTION III: Borrow Site Investigation - pages 6 & 7

- Need to find clay cap borrow site
- Unlike Five Forks, no nearby source area
- Have provisions for doing extensive testing on 4 Sites - 2 known; 2 unknown (made assumptions)
- Total Investigation Cost = \$ 84,500 - includes testing costs
- If only 2 Sites needed will only charge that amount

* SECTION IV: Bid Package Development

- Conduct administration functions related to retaining a Contractor
- Evaluate Bids including checking references; evaluating costs; ability to perform the job
- Make recommendation to County on Contractor
- Cost = \$ 9,840

* SECTION V: PHASE I CONSTRUCTION SERVICES

- Full Time Technical Representative During Construction (estimated at 150 work days for 40 acre site)
- 2nd Half Time Tech Rep During Construction
- Administration/Pay Request Processing/Change Orders
- Engineer's Review
- Topographic As-Built Survey
- Cost = \$ 102,000 (40 acre site)

- * SECTION VI: PHASE I SOIL TESTING
 - Conducting soil testing to verify cap construction
 - Conduct tests as required by DHEC
 - \$ 24,605

- * SECTION VII: PHASE I POST CONSTRUCTION
 - Final Site Tours with County and DHEC
 - Engineer's Final Certification
 - Other Post Construction Admin
 - \$ 7,600

* SUBTOTAL	\$ 320,245.00
* 15% CONTINGENCY	\$ 48,036.75
* TOTAL	\$ 368,281.75